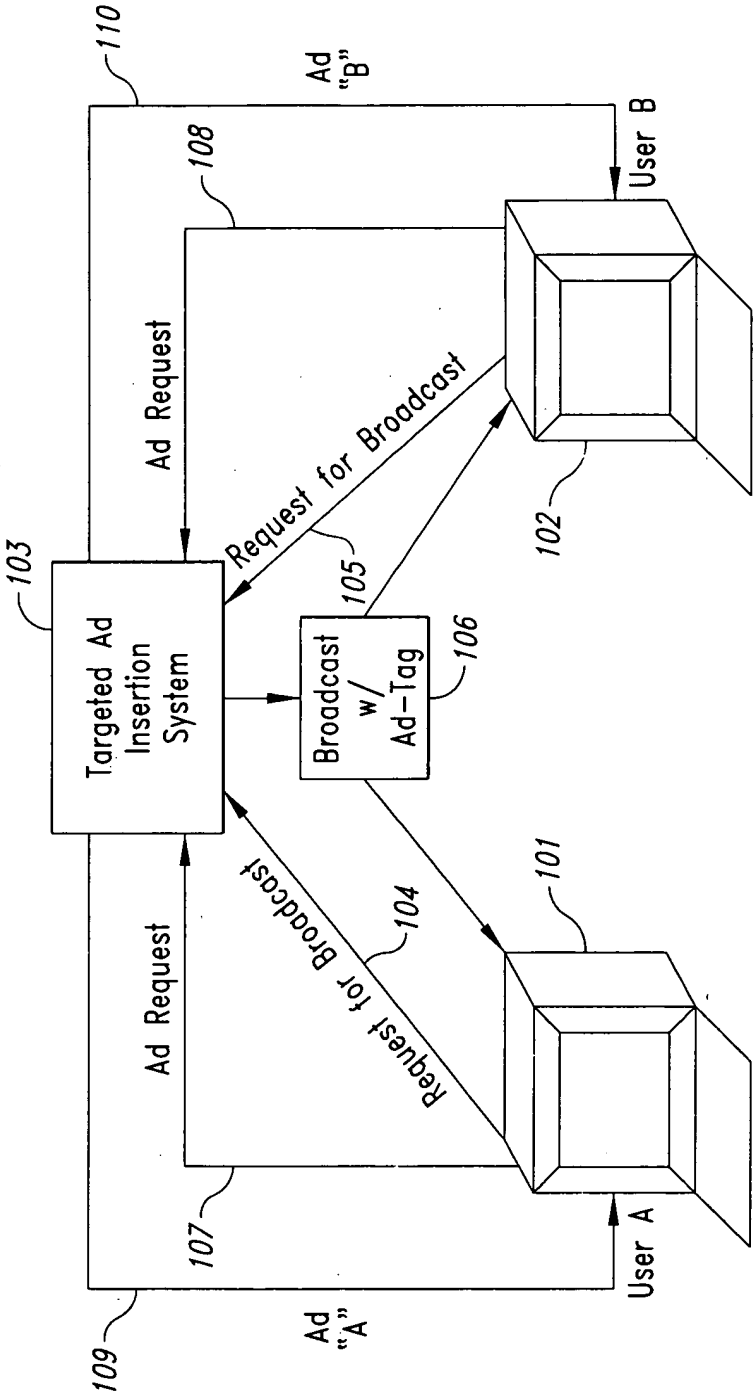
110
Ad "B"
User B
108
Ad Request
Request for Broadcast
105
102
103
Targeted Ad Insertion System
Broadcast w/ Ad-Tag
106
Request for Broadcast
104
101
Ad Request
107
User A
109
Ad "A"

Fig. 1

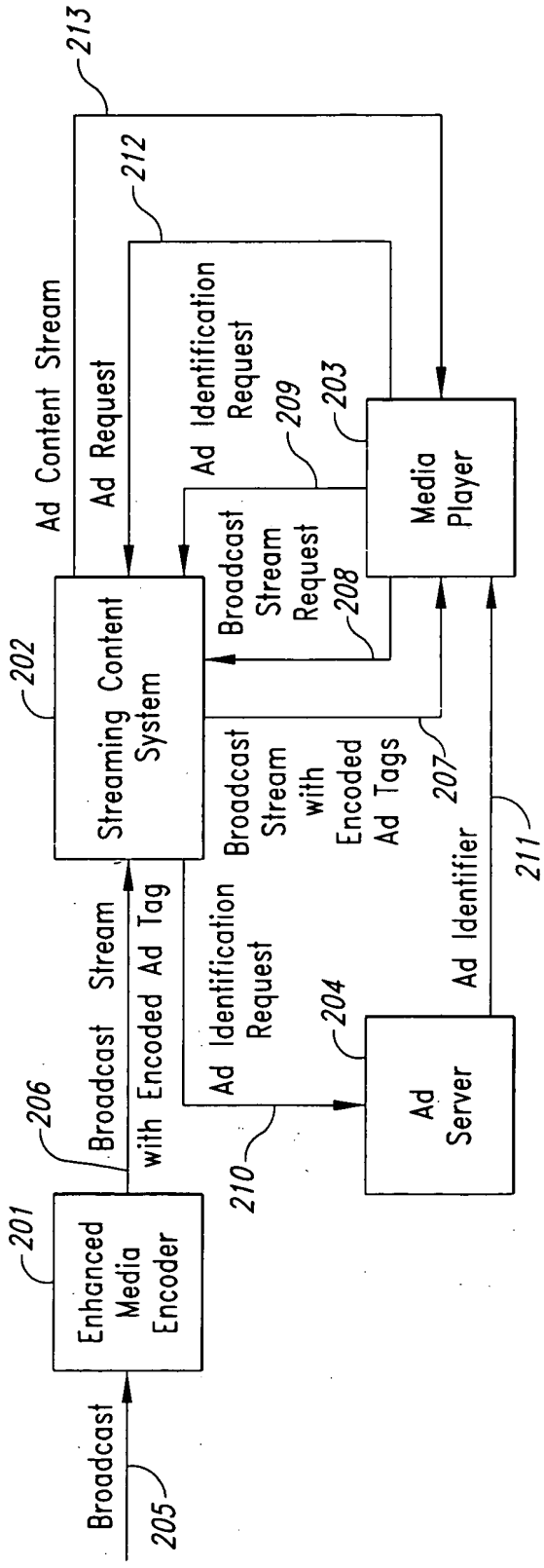
Broadcast
205
Enhanced Media Encoder
201
Broadcast Stream with Encoded Ad Tag
206
Ad Identification Request
210
Ad Server
204
Ad Identifier
211
Broadcast Stream with Encoded Ad Tags
207
Streaming Content System
202
Broadcast Stream Request
208
Ad Identification Request
209
Media Player
203
Ad Request
212
Ad Content Stream
213

Fig. 2

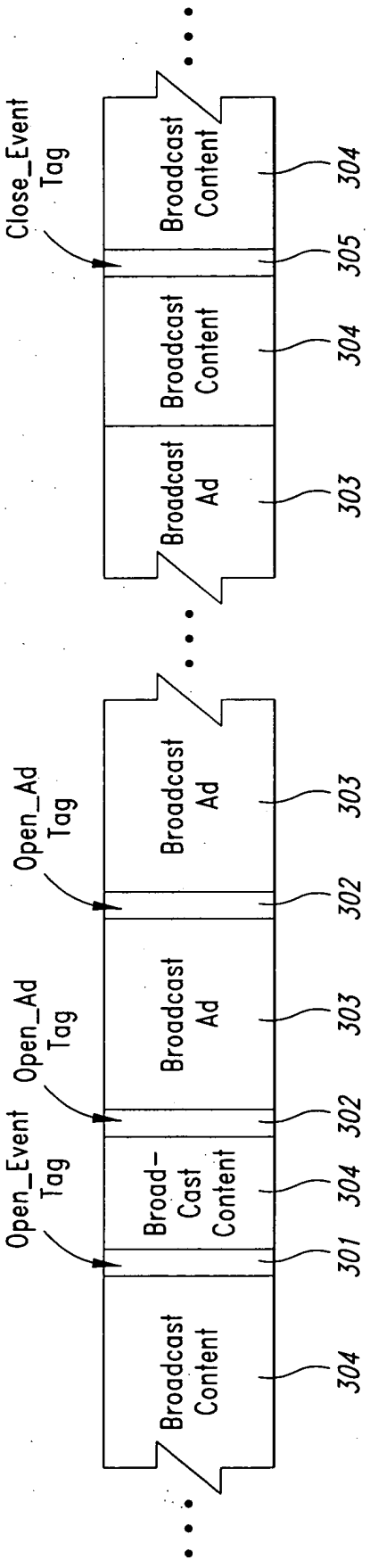
Broadcast Content
304
Close_Event Tag
305
Broadcast Content
304
Broadcast Ad
303
Broadcast Ad
303
Open_Ad Tag
302
Broadcast Ad
303
Open_Ad Tag
302
Broad-Cast Content
304
Open_Event Tag
301
Broadcast Content
304

Fig. 3

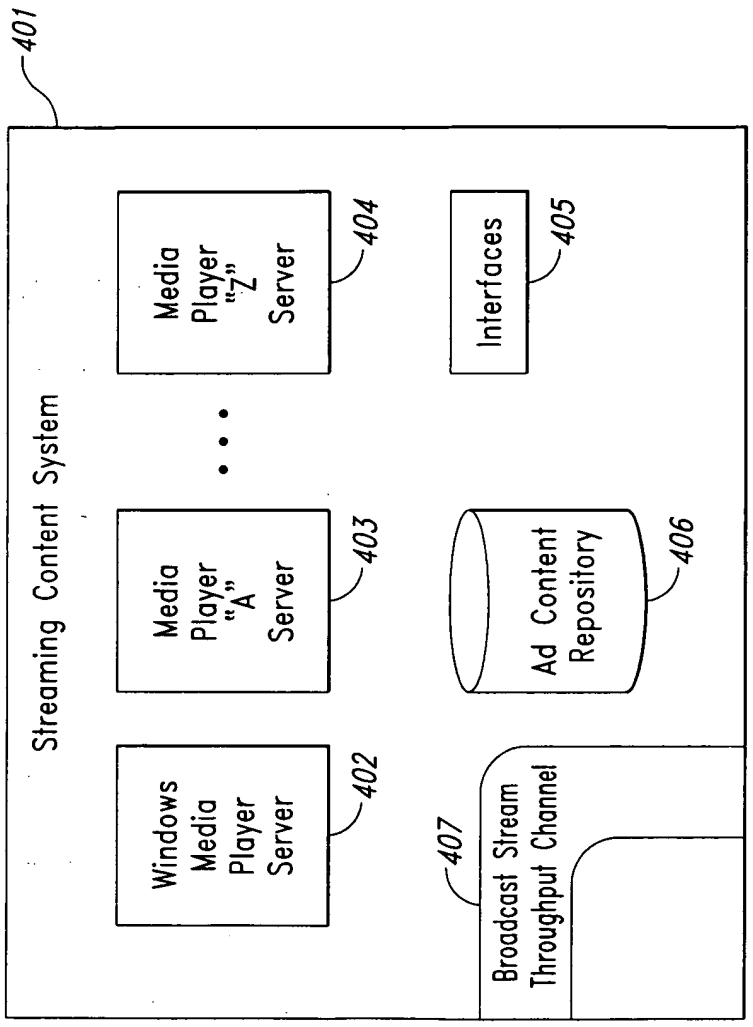
401
Streaming Content System
Windows Media Player Server
402
Media Player "A" Server
403
Media Player "Z" Server
404
Interfaces
405
Ad Content Repository
406
Broadcast Stream Throughput Channel
407

Fig. 4

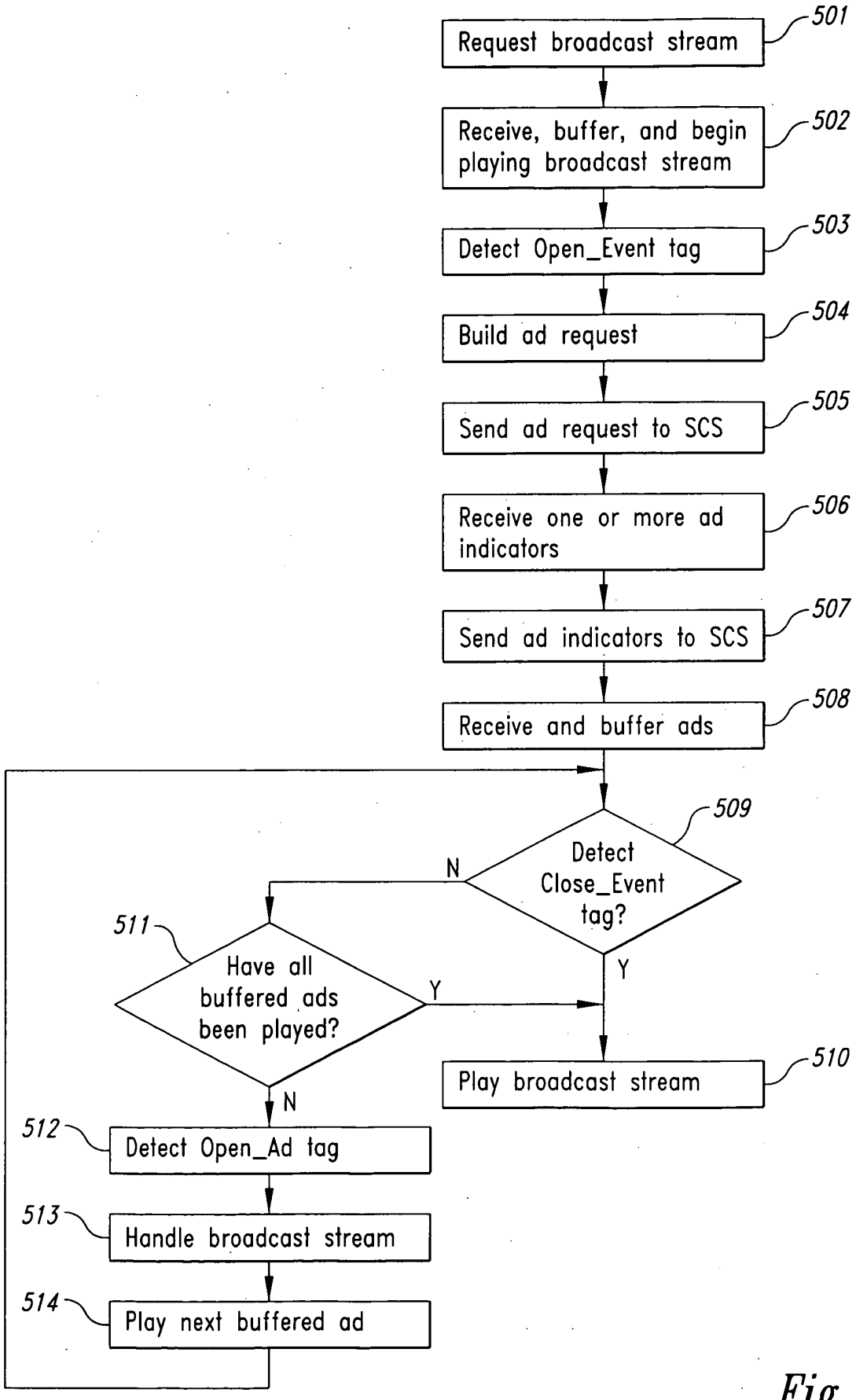
Request broadcast stream
501
Receive, buffer, and begin playing broadcast stream
502
Detect Open_Event tag
503
Build ad request
504
Send ad request to SCS
505
Receive one or more ad indicators
506
Send ad indicators to SCS
507
Receive and buffer ads
508
Detect Close_Event tag?
509
N
Y
Have all buffered ads been played?
511
Y
N
Play broadcast stream
510
Detect Open_Ad tag
512
Handle broadcast stream
513
Play next buffered ad
514

Fig. 5

20020032750

```
<ASX version="3.0">
        <title>Dynamic Ad Insertion Demo</title>
        <ENTRY>
                <REF HREF="mms://wmr01sea.activate.net/rcs"/>
        <ENTRY>
</ASX>
```

Fig. 6A

```
<ASX version="3.0">
        <title>Dynamic Ad Insertion Demo</title>
        <ENTRY>
                <REF HREF="mms://wmr01sea.activate.net/rcs"/>
        <ENTRY>

<!-- NOTE: This ASX file only inserts 30 second ads.
It would be possible to insert ads of other lenghts as well.
For example, the name of another 90 second Event tag may be "60,30"
-->

<!--60 Second Events-->                                          6B03
        <EVENT NAME="30,30" WHENDONE="RESUME">
                <ENTRY CLIENTSKIP="NO">
                <REF
HREF=http://64.85.69.243.98/tserver/site=siteone/area=rcs/size=30_SEC_AUDIO_16K/>   6B05
                </ENTRY>
                <ENTRY CLIENTSKIP="NO">
                <REF
HREF=http://64.85.69.243.98/tserver/site=siteone/area=rcs/size=30_SEC_AUDIO_16K/>   6B05
                </ENTRY>
        </EVENT>                                                 6B04
<!--90 Second Events-->
        <EVENT NAME="30,30,30" WHENDONE="RESUME">
                <ENTRY CLIENTSKIP="NO">
                <REF
HREF=http://64.85.69.243.98/tserver/site=siteone/area=rcs/size=30_SEC_AUDIO_16K/>
                </ENTRY>
                <ENTRY CLIENTSKIP="NO">
                <REF
HREF=http://64.85.69.243.98/tserver/site=siteone/area=rcs/size=30_SEC_AUDIO_16K/>
                </ENTRY>
                <ENTRY CLIENTSKIP="NO">
                <REF
HREF=http://64.85.69.243.98/tserver/site=siteone/area=rcs/size=30_SEC_AUDIO_16K/>
                </ENTRY>
        </EVENT>

</ASX>
```

6B01

6B02

Fig. 6B

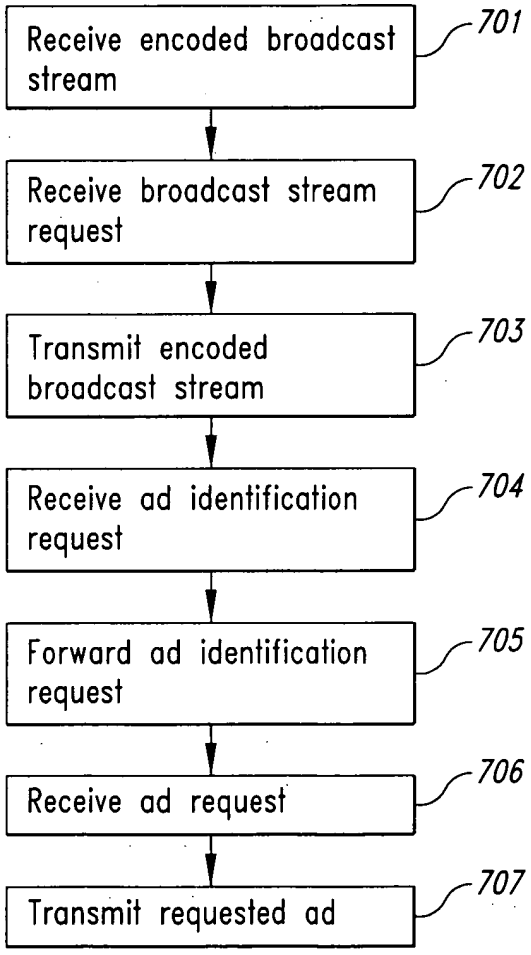
Receive encoded broadcast stream
701
Receive broadcast stream request
702
Transmit encoded broadcast stream
703
Receive ad identification request
704
Forward ad identification request
705
Receive ad request
706
Transmit requested ad
707

Fig. 7

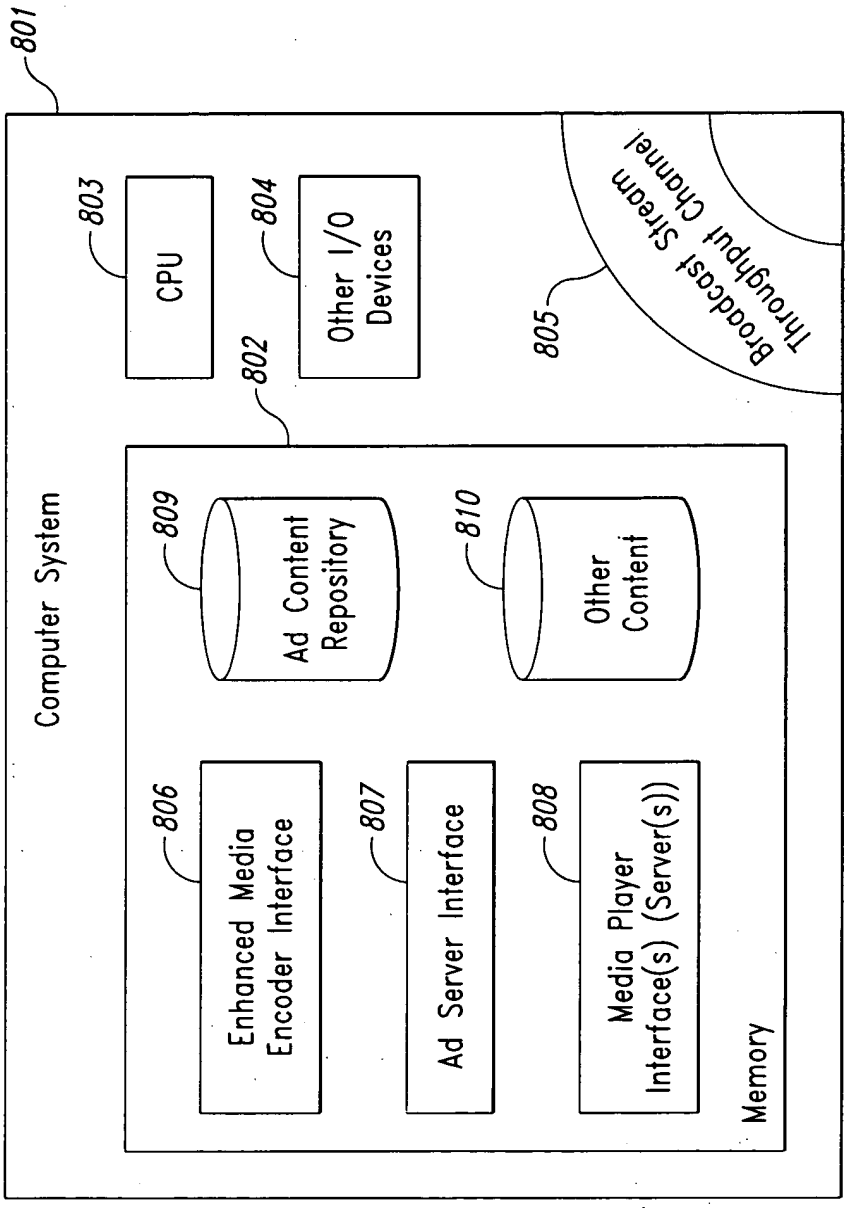
801
Computer System
803
CPU
804
Other I/O Devices
805
Broadcast Stream Throughput Channel
802
809
Ad Content Repository
810
Other Content
806
Enhanced Media Encoder Interface
807
Ad Server Interface
808
Media Player Interface(s) (Server(s))
Memory

Fig. 8

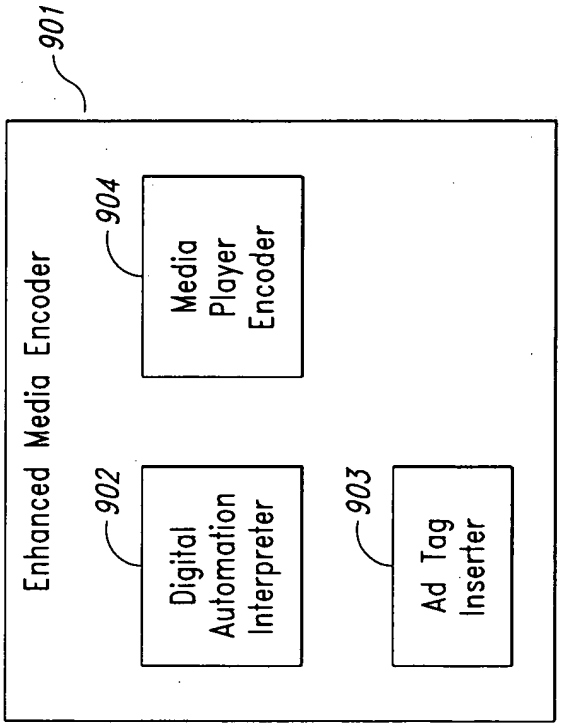
901
Enhanced Media Encoder
904
Media Player Encoder
902
Digital Automation Interpreter
903
Ad Tag Inserter

Fig. 9

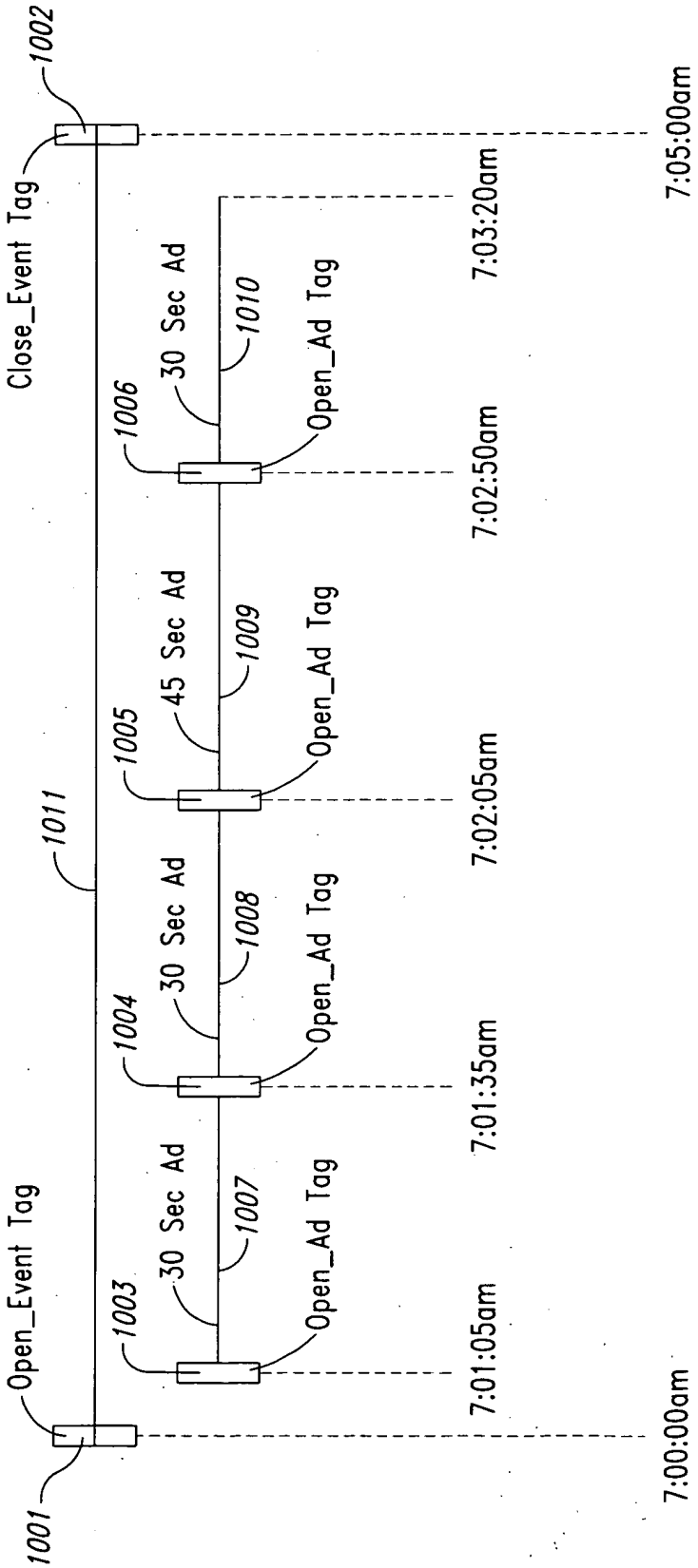
1001
Open_Event Tag
7:00:00am
1003
30 Sec Ad
Open_Ad Tag
7:01:05am
1007
1004
30 Sec Ad
Open_Ad Tag
7:01:35am
1008
1005
45 Sec Ad
Open_Ad Tag
7:02:05am
1009
1006
30 Sec Ad
Open_Ad Tag
7:02:50am
1010
1011
Close_Event Tag
1002
7:03:20am
7:05:00am

Fig. 10